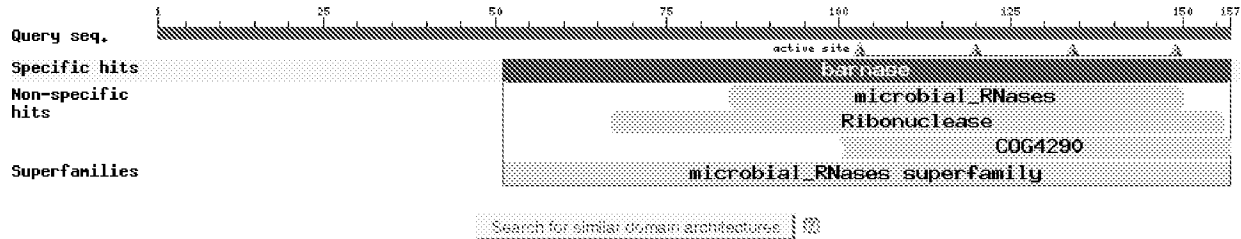


## Conserved domains on [gil224925|prfl1204204A]

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barnase

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## List of domain hits

	Description	Pssmid	Multi-dom	E-value
cd00933, barnase, Barnase, a member of the family of homologous microbial ribonucleases, catalyses the...		29493	no	1e-51
Barnase, a member of the family of homologous microbial ribonucleases, catalyses the cleavage of single-stranded RNA via a two-step mechanism thought to be similar to that of pancreatic ribonuclease. The mechanism involves a transesterification to give a 2', 3'-cyclic phosphate intermediate, followed by hydrolysis to yield a 3' nucleotide. The active site residues His and Glu act as general acid-base groups during catalysis, while the Arg and Lys residues are important in binding the reactive phosphate, the latter probably binding the phosphate in the transition state. Barstar, a small 89 residue intracellular protein is a natural inhibitor of Barnase.				
CD Length: 107 Bit Score: 197.12 E-value: 1e-51				
gi_224925	51	INTFQGVADYLTQTYRKLDPNYITKSEAQALGRVASKGNLADYAPGKSIIGGDIFFENRRCRLPGKSGRTNRREADINTTEGFR	100	
cd00933	1	INTFQGVADYLTQTYRKLDPNYITKSEAQALGRVASKGNLADYAPGKSIIGGDIFFENRRCRLPGKSGRTNRREADINTTEGFR	80	
90 100				
gi_224925	131	NSDRILYSSDWLIYKTTDRYQFTTKIR	157	
cd00933	81	GADRLLYENGGLIYKTTDRYQFTTKIR	107	
cd00389, microbial_RNases, microbial_RNases. Ribonucleases (RNases) cleave phosphodiester bonds in RNA and are...		29490	no	2e-16
pfam00545, Ribonuclease, ribonuclease		109596	no	4e-21
COG4290, COG4290, Guanyl-specific ribonuclease Sa [Nucleotide transport and metabolism]		34012	no	7e-04

## Blast search parameters

Options: Database: CDD Low complexity filter: yes E-value threshold: 0.010 Max. hits: 50  
Data Source: Precalculated data  
System: Search creator: newblast Software: blastp 2.2.20+ Service: rpsblast

## References:

- Marchler-Bauer A et al. (2007), "CDD: a conserved domain database for interactive domain family analysis.", *Nucleic Acids Res.*35(D)237-240.
- Marchler-Bauer A et al. (2005), "CDD: a Conserved Domain Database for protein classification.", *Nucleic Acids Res.*33(D)192-196.
- Marchler-Bauer A, Bryant SH (2004), "CD-Search: protein domain annotations on the fly.", *Nucleic Acids Res.*32(W)327-331.

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